WHAT IS CLAIMED IS

1. An isolated polynucleotide that comprises a sequence that encodes a reverse transcriptase polypeptide or a fragment of a reverse transcriptase polypeptide, wherein the reverse transcriptase polypeptide comprises a sequence having 88% identity to either SEQ ID NO:1 or SEQ ID NO:2.

2. The isolated polynucleotide of claim 1 wherein the polynucleotide utilizes a universal genetic code.

3. The isolated polynucleotide of claim 1 wherein the polynucleotide comprises a sequence set forth in SEQ ID NO:3 or SEQ ID NO:4.

4. The isolated polynucleotide of claim 3, wherein the polynucleotide comprises a sequence as set forth in SEQ ID NO:3.

5. The isolated polynucleotide of claim 3, wherein the polynucleotide comprises a sequence as set forth in SEQ ID NO:4.

6. The isolated polynucleotide of claim 4, wherein the polynucleotide consists essentially of a sequence as set forth in SEQ ID NO:3.

7. The isolated polynucleotide of claim 5, wherein the polynucleotide consists essentially of a sequence as set forth in SEQ ID NO:4.

8. A recombinant vector comprising a polynucleotide sequence selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and SEQ ID NO:6.

9. The recombinant vector of claim 8 wherein the polynucleotide is operably linked to a heterologous promoter.

10. The recombinant vector of claim 9 wherein the heterologous promoter is selected from the group consisting of CMV promoter, alcohol dehydrogenase promoter, T7 promoter, lactose-inducible promotes, heat shock promoter, temperature-inducible promoters, and tetracycline-inducible promoter.

11. A cell comprising an isolated polynucleotide that encodes a pFOXC-RT having a sequence that is at least 88% identical to SEQ ID NO:1 or SEQ ID NO:2.

12. The cell of claim 11 wherein the cell is selected from the group consisting of mammalian cell, mammary gland cell, plant cell, bacterial cell, yeast cell, a bacterium.

13. The cell of claim 11 wherein the cell is an Escherichia coli.

14. The cell of claim 11, wherein the cell is a Saccharomyces cerevisiae.

15. A method of making a pFOXC-RT reverse transcriptase polypeptide comprising expressing in a heterologous protein expression system an isolated polynucleotide selected from the group consisting of SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, and SEQ ID NO:6, wherein a pFOXC-RT is produced, and the pFOXC-RT is isolated from the heterologous system.

16. The method of claim 15 wherein the heterologous protein expression system comprises an Escherichia coli bacterial cell.

17. A method of making a complementary DNA molecule comprising (a) combining a template polynucleotide with a pFOXC-RT polypeptide, which has a sequence that is at least 88% identical to SEQ ID NO:1 or SEQ ID NO:2, in a mixture, (b) incubating the mixture in the presence of (i) $MgCl_2$, wherein the $MgCl_2$ is at a concentration in a range of 1.5 mM to 150 mM, inclusively, (ii) at a pH in a range of 6.0 to 10.0, inclusively, and (iii) at a temperature in a range of 18°C to 54°C, inclusively, wherein (c) a new polynucleotide strand is synthesized.

18. The method of claim 17 comprising combining an oligonucleotide primer in the mixture.

19. The method of claim 18 wherein the oligonucleotide primer comprises at least one mismatched base relative to the template polynucleotide.

20. The method of claim 17, wherein the template polynucleotide is a RNA.

21. The method of claim 20 wherein the RNA is a small RNA.

22. The method of claim 17 wherein the temperature is 42°C, the $MgCl_2$ is at a concentration of 15 mM and the pH is 8.2.